DOCUMENT RESUME

ED 444 247 EA 030 565

AUTHOR	Edds, Daniel B.
TITLE	The Role of Activity Based Costing (ABC) in Educational Support Services: A White Paper.
PUB DATE	1999-00-00
NOTE	10p.; Prepared with Strategic Development Associates. Cover title varies.
PUB TYPE	Reports - Descriptive (141)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Accounting; Case Studies; *Cost Effectiveness; *Educational Finance; Elementary Secondary Education; *Improvement Programs; *Management Development; *Public Schools

ABSTRACT

Many front-line managers who are assuming more financial responsibility for their organizations find traditional cost accounting inadequate for their needs and are turning to Activity Based Costing (ABC). ABC is not a financial reporting system to serve the needs of regulatory agencies, but a tool that tracks costs from the general ledger statement to work activities and then to the actual output of those activities. It mirrors the work of people and equipment; it documents costs as an organization actually consumes financial resources. ABC seeks to answer four very different questions: (1) What activities are being performed by the organization? (2) How much does it cost to perform those activities? (3) Why does the organization need to perform those activities? and (4) How much of an organization's money does each activity consume in the production and delivery of products and services? The paper presents a case study of how ABC was applied to a communications center at a community college in order to reduce costs. Finally, the paper details why such factors as the cost structures of schools, the pace of change, and the cost of processing data have created an interest in ABC. (DFR)

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A WHITE PAPER

The Role of Activity Based Costing (ABC) In Educational Support Services

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A Primer on:

Activity Based Costing

Traditional accounting is at best useless, and at worst dysfunctional and misleading. John Shank, Ph.D., speaking at the 75th anniversary conference of the Institute of Management Accountants.

These are rather harsh words for systems and procedures which have been in place for decades if not centuries. However, many front line managers who are assuming more and more financial responsibility for their organizations find traditional cost accounting inadequate for their needs.

ABC or Activity Based Costing is what many organizations are turning to. ABC should not be understood as a financial reporting system to serve the needs of regulatory agencies. It is a tool that tracks cost from the General Ledger statement to work activities and then to the actual output of those activities. Because of this, it actually mirrors the work of people and equipment. It documents costs as an organization actually consumes financial resources. ABC seeks to answer four very different questions?

ACTIVITY BASED COSTING

Documents the consumption of dollars as the organization actually consumes them.

1. What activities are being performed by the organization?
2. How much does it cost to perform those activities?
3. Why does the organization need to perform those activities?
4. How much of an organization's money does each activity consume in the production and delivery of products and services?

Differences from traditional cost management systems:

Traditional General Ledger Accounting	Activity Based Costing (ABC)
Supports reporting needs of external agencies	Supports needs of internal leaders & managers
Tracks costs by financial transactions	Tracks costs as work is actually performed
Provides little help in determining why budget variances occur	Pinpoints exactly where budget variances occur
Provides no data on the cost of quality	Provides extensive data on the cost of quality

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Three Views of Cost

Traditional General Ledger reporting documentation produces one view of cost. ABC data produces two additional views of cost. These can best be seen in the following illustration.

Metro School District's bakeshop and student kitchen

Traditional Accounting	
Salaries	$350,000
Benefits	$125,000
Raw materials	$475,000
Capital equipment	$ 95,000
Rent	$ 45,000
Utilities	$ 25,000
Total	$1,115,000

ABC Activity Model	
Take orders	$ 75,000
Classroom lectures	$175,000
Bake Cakes	
◆ Make batter	$330,000
◆ Bake layers	$125,000
◆ Frost cakes	$ 75,000
Bake Pastries	
▪ Make dough	$255,000
▪ Bake pastries	$175,000
▪ Finish pastries	$ 75,000
Deliver baked goods	$ 80,000
Total	$1,115,000

ABC Product Cost View	
Carrot cakes	$215,000
Chocolate layer cakes	$205,000
5 Layer wedding cakes	$165,000
Breakfast bagels	$205,000
Breakfast muffins	$180,000
Breakfast strudels	$145,000
Total product costs	$1,115,000

Traditional View of Cost

Traditional General Ledger accounting is based on demands from external reporting agencies. As such, it's primary usefulness is for those agencies which require it.

Activity View of Cost

The ABC model is better suited to understanding how resources are actually consumed. It produces a model of cost that gives front line management the tools to target specific activities for improvement.

Service or Product View of Cost

The ABC product view of cost provides senior managers the data to make strategic decisions for the future of the bake shop.

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Case study #1: Community College, Communications Center

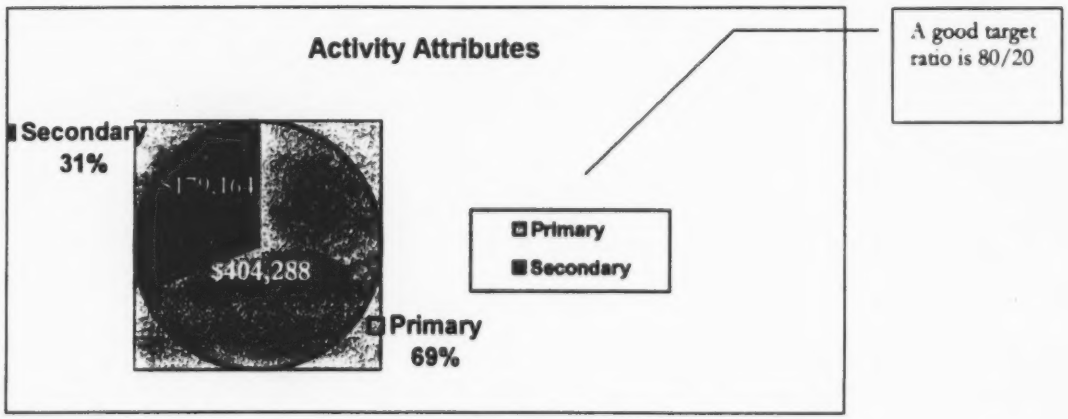
The Communications Center of this particular Community College was the hub of campus communication. It was the primary distribution point for all incoming mail, the center of all campus reprographics and the provider of all bulk mailing services including managing several campus mailing lists. In addition, it picked up all outgoing USPS and intra-campus mail and distributed it accordingly. Annual expenditures for the center were $583,452. It employed 5 FTE and several student workers. It was considered by many to be the best-run organization on campus.

ACTIVITY BASED COSTING

- A MIS system
- A costing system
- A data collection tool
- An operations tool

An ABC project was initiated to help understand departmental costs and improve operating efficiencies. In this process, 23 separate activities were identified. These ranged from sorting incoming mail to delivering mail to the post office. Since the budgets for the center covered several accounting centers, an income statement was first generated and then expenses categorized by four Resource Centers: personnel, supplies, equipment and outside services. By working with the staff, the costs of all personnel expenses were assigned to each activity. Then expenses for supplies, equipment and outside services were added to the appropriate activities to give us a total cost per activity.

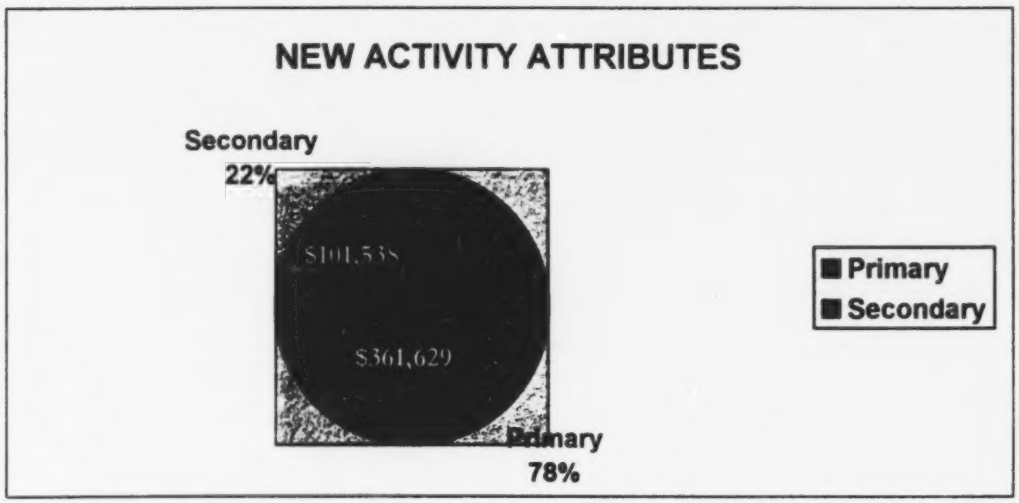
The next step in this process was to assign attributes to each activity. Activities were identified as either primary or secondary. Primary activities were those that had a direct benefit to the operation. Secondary activities were those that were important but added little value to the operation. For example, completing copy work was a primary activity. However, creating charge back data was a secondary activity. Since each activity carried a cost, total costs of primary and secondary activities could be calculated.



This ratio of 69%-31% was determined to be an important indicator of efficiency. Since most ABC practitioners suggest a target ratio of 80%-20% the staff began looking for ways to reduce or eliminate secondary activities and improve on primary activities.

This process lead to several formal recommendations of investment in automation technology. Total investment for the improvement plan was $107,000. Since the cost of each activity was known, calculations could easily identify the immediate impact on those activities. For example, the total cost of operating the high-speed production copiers was $.037 per copy. This sounds high given the fact that the "click" charge was about $.01 per copy. However, other related activities increased the cost per copy. When these secondary activities were automated and equipment purchased to better match customer requirements, the total cost per copy came down to about $.018 per copy.

In addition, by targeting specific activities for efficiency improvements, a full FTE was eliminated from the campus payroll. Total first year savings from improvements in technology and operations were $120,175.



Where Did ABC Come From?

Ask any manager of a public educational institution about the relevance of their budget reports and most, if not all, will quietly explain how they are useless. The reason for this is simple, contemporary budget reports bear little resemblance to how work is performed. While they are very good at showing a manager actual expenditures vs. budgeted expenditures, they are very poor at showing why expenditures vary from budget. In addition, when determining the total cost of an educational service whether it be on the support side or the educational side, traditional accounting provides no real help.

vegasBecause of these problems, two professors at Harvard University, Robin Cooper and Robert Kaplan developed the concept of Activity Based Costing. Three converging factors have created the interest in ABC:

1. **The cost structures of schools, government agencies and commercial organizations have changed dramatically**. At one time, direct labor accounted for 50% of total costs for manufacturing firms. Today it is about 10%. School districts were small, encompassing a few schools. Today some districts have 40 or more schools in their districts.

   While modern accounting methodology may have worked well 90 years ago, it has really not changed much since then. As such, it has little relevance to those who need to understand cost as it relates to the way work is performed.

2. **The pace of change**. Ten years ago, computers were relatively few in schools. Today schools are networked, email is common and computers are a given necessity for any serious classroom. Not too many years ago, home schoolers were seen as part of a right wing fringe movement. Today many public schools are setting up programs to assist these consumers and getting paid handsomely to do so. Understanding the costs of these services and how they relate to quality education is vital to taxpayer support.

3. **The cost of processing data has fallen dramatically.** Activity Based Costing produces significant data. Without modern day computing technology, ABC would be a very expensive process. However, with contemporary technology, ABC is highly affordable. What is more, much of the data already exists within the organization.

For further information, contact:

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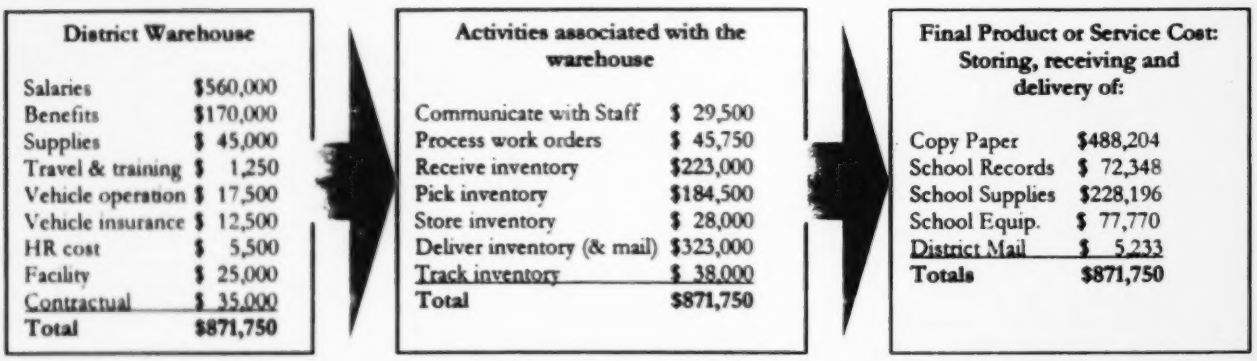
Daniel B. Edds is an ABC practitioner and an Affiliated Partner with ABC Technologies. His primary focus is working with public educational institutions in developing cost management systems.

Activity Based Costing in their efforts to trim waste and improve the quality of services. The following is a partial list of agencies that have discovered the power of ABC:

- City of Indianapolis
- Baltimore County, Maryland
- City of Phoenix
- California Franchise Tax Board
- Kansas City Power & Light
- United States Department of Defense

What is Activity Based Costing?

Activity Based Costing is a process that identifies the key and significant activities performed by any organization. It then traces the cost of those activities throughout the organization to arrive at a cost and then calculates the consumption of those costs by either products & services or specific customers. In graphical form, it looks like this:



How We Can Help

There are three ways in which we can assist client organizations:

1. Provide cost evaluations and performance appraisals of specific departments or divisions. This will result in a "snap shot" of processes, the costs associated with those processes and how they impact final output.
2. Provide training in Activity Based Costing.
3. Provide software-based implementation of an ABC system for continuous evaluation and analysis of product & customer cost.

An Affiliated Partner with:
ABC Technologies

The world's leading provider of ABC software

Daniel B. Edds, MBA
Strategic Development Associates

A Company Profile

The consulting services of Daniel B. Edds and Strategic Development Associates began with a request from administrators of a public school district. The district needed an outside opinion on how to develop and manage cost efficient reprographic technology. This initial engagement led to other projects that:

- Integrated networked reprographic technology with curriculum design.
- Designed systems that would increase district access to central copy services while reducing total district cost.
- Evaluated the cost efficiency of various support services including, nutrition services and central copy services.
- Reduced the cost of a communication center for a leading community College by nearly 20%.

Training

Responding to the needs of the market place, Mr. Edds has worked with various public agencies to develop and provide training for front line managers and leaders. Training has focused in three areas:

- Operations management.
- Management Accounting for managers of educational support services.
- Management and leadership development.

Management Information Systems

Once again, Mr. Edds saw the need within public agencies to provide effective and up to date cost management systems. The answer was **Activity Based Costing (ABC).** Used for nearly ten years by advanced manufacturing firms to establish accurate product costs & customer profitability, ABC is making its greatest impact in public agencies. Local, state and federal government agencies are all discovering the power of

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